

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT
OF VIRGINIA
Richmond Division

GOLDEN BETHUNE-HILL, *et al.*,

Plaintiffs,

v.

VIRGINIA STATE BOARD OF ELECTIONS, *et al.*,

Defendants.

Civil Action No. 3:14cv852

SECOND REPORT OF THE SPECIAL MASTER

January 17, 2019

Bernard Grofman*
Special Master

*Bernard Grofman is Distinguished Professor of Political Science and Jack W. Peltason Endowed Chair of Democracy Studies at the University of California, Irvine, and former Director of the UCI Center for the Study of Democracy. His research deals with topics such as voting rights, electoral rules, theories of representation, behavioral social choice, and political science methodology. He is co-author of five books (four from Cambridge University Press and one from Yale University Press), and co-editor of 23 other books; with over 300 research articles and book chapters, including ten in the *American Political Science Review*. A member of the American Academy of Arts and Sciences since 2001, he has been a scholar-in-residence at universities and research centers in the U.S., Austria, Canada, France, Germany, Hungary, Italy, Japan, the Netherlands, Spain, and the UK, and he has an honorary Ph.D. from the University of Copenhagen (Denmark) for his research on comparative electoral systems. He has previously been involved as a consultant or expert witness for federal courts, the U.S. Department of Justice, both major political parties at a state or national level, and civil rights groups such as the NAACP Legal Defense and Educational Fund and the Mexican-American Legal Defense and Educational Fund. As a specialist on redistricting, his own research, or co-authored Amicus Briefs, or chapters in books he has edited, has been cited in more than a dozen U.S. Supreme Court decisions, most recently in *Arizona State Legislature v. Arizona Independent Redistricting Commission* (2015) and, perhaps most notably, in *Thornburg v. Gingles*, 478 US 30 (1986).

SECOND REPORT OF THE SPECIAL MASTER

EXECUTIVE SUMMARY

Because there is no new plan offered by the State of Virginia for the House of Delegates that must be given special deference as a potential remedy, the starting point for any court remedial plan remains the 2011 Enacted Plan. But, to the extent the 2011 Enacted Plan for the House of Delegates “subordinated traditional districting principles to racial considerations” it is “not owed deference” *Abrams v. Johnson*, 521 U.S. 74, at 85 (1997). There were eleven districts in the 2011 Enacted plan identified as unconstitutional: districts 63, 69, 70, 71, 74, 77, 80, 89, 90, 92, and 95. These districts must be redrawn in a constitutional fashion in any remedy. Moreover, any court adopted plan must be narrowly tailored to remedy the constitutional infirmities in the 2011 enacted plan.

One important element of a narrowly tailored remedy is that it should confine its changes to those districts which must be changed in the process of the obligatory redrawing of the 11 unconstitutional districts. At minimum, this principle of narrow tailoring suggests the appropriateness of limiting the changes in any remedial plan to the 11 unconstitutional districts and to the 22 additional districts that are adjacent to the unconstitutional ones -- unless there are compelling geographic or demographic reasons to the contrary. This principle would limit changes to no more than 33 districts.

The principle of narrow tailoring also suggests limiting district changes in the remedial plan to the 23 districts that contain pieces of counties that are also contained within the unconstitutional districts, except as might be needed to assure population balance across the redrawn districts. Unconstitutionality was specifically found for only eleven districts in the 2011 enacted plan –with this finding in all but one of the districts that were drawn with the avowed aim of containing a 55% black voting percentage. However, as a matter of simple geographic logic, if there are districts other than the unconstitutional eleven that contain portions of the populations of some of the 15 counties that have pieces in the eleven districts, at least some of those districts had to have been affected by/implicated in the line drawing that created the unconstitutionality in the eleven districts found to be unconstitutional. This is especially true if the portion(s) of a county not contained within the unconstitutional districts have populations that are racially distinct from the portion(s) of the county found inside the unconstitutional districts. Thus, remedying the unconstitutionality of the eleven districts will, necessarily, require changes in the district boundaries of some of the additional districts containing the counties found within the unconstitutional eleven. In terms of this logic, as many as 34 districts might need to be redrawn.

However, on the one hand, not all of these 34 districts are either unconstitutional or adjacent to one of the unconstitutional districts. And, on the other hand, not all of the districts not found to be unconstitutional that lie adjacent to the unconstitutional districts contain pieces of one or more of the counties found

in an unconstitutional district. There are three districts that are adjacent to one or more of the unconstitutional districts, but which do not contain a piece of any of the 15 counties found in whole or part within the unconstitutional districts (districts 55, 96, 97). And there are five districts that are not adjacent to one or more of the unconstitutional districts, but which do contain a piece of at least one of the 15 counties found in whole or part within the unconstitutional districts (districts 21, 56, 65, 82, 84).

The two sets of constraints on narrowly tailoring, and the fact that they do not perfectly overlap, led me to recommend to the court only maps that confined their boundary changes to the unconstitutional districts and those districts that satisfy both a “district adjacency constraint” and a “potentially implicated county” constraint, i.e. districts that lie in the intersection of these two sets of constraints. There are 19 districts that are both adjacent to one or more the unconstitutional ones and also contain a piece of at least one of the 15 counties found in whole or part within the unconstitutional districts (districts 61, 62, 64, 66, 68, 72, 73, 75, 76, 78, 79, 81, 83, 85, 91, 93, 94, 96, 100). Thus, there are 30 districts in the intersection of a “district adjacency constraint” and a “potentially implicated county” constraint.¹

However, a careful investigation of redistricting options demonstrates that the number of districts that need to be redrawn in the 2011 enacted map to

¹ There are 38 districts that lie in the union of the “adjacency” and “affected county” constraint.

effectuate a narrowly tailored constitutional map is considerably lower than 30. In other words, in my view, not all the districts that are both adjacent to the unconstitutional ones and contain portions of counties found within the unconstitutional districts need to be redrawn in order to construct a constitutional remedy that is narrowly tailored. The illustrative maps I propose to the Court change no more than 26 districts, and some combinations of the modularized plans would result in a change in as few as 21 districts.

Because there are potential tradeoffs among traditional redistricting criteria (including tradeoffs between limiting the number of districts that are changed from the 2011 Enacted Map and factors such as minimization of unnecessary county splits or improving compactness), other plan feature comparisons may lead the Court, under the totality of circumstances, to a preference for a remedy that changes more than 21 districts. But, plans that changed more than 26 districts would, in my view, require a compelling factual argument that such additional district changes were needed to create a narrowly tailored constitutional remedy. Such an argument would appear to be contradicted by the illustrative map drawing I have done.

Having reached the view, as a political science expert, that no more than 26 districts need to be changed in order to effectuate a constitutional remedy I cannot recommend any of the five remedial plans submitted to the Court on November 2, since each changes from 30 to 33 districts, and four change at least one district not contained in the intersection of “adjacency” and “affected county” constraints

identified above. Moreover, each of these plans has other major deficiencies.²

These other deficiencies are discussed in more detail in Appendix A to this Report.

Appendix A to this Second Report contains text that is virtually verbatim from the Appendix to my Report of December of December 7, 2018.

My goal has been to offer the Court what I view as narrowly tailored illustrative constitutional remedies that are not drawn using race as a preponderant criterion, but in which the African-American community continues to have a realistic equal opportunity to elect candidates of choice in the eleven unconstitutional districts, while also maintaining such an opportunity for the African-American community in district 75. I now turn to the features of the maps I recommended to the Court.³

1. The illustrative maps I present to the Court are what I refer to as “modularized”

² However, while these maps were not maps I could recommend to the Court, I did examine them to further inform myself about districting options. I should note, moreover, that I have no view about whether or not any of the five remedial plans submitted on November 2 do or do not exhibit a racially preponderant motive, nor would it be appropriate for me, as Special Master, to reach a conclusion about this aspect of a remedial plan, since this requires a legal finding that can only be made by a court. Rather, I seek only to ensure that any plan I recommend to the Court be one that offers a narrowly tailored remedy to the constitutional infirmities found.

³ I am deeply indebted to Mr. Jonathan Cervas, Ms. Julie Smith, and Mr. Kent Stigall in providing information about Virginia redistricting, demography and geography; reports on submitted remedial plans, and technical map drawing support for plans constructed under my direction. I also appreciate the assistance of Mr. Amigo Wade in obtaining relevant information and in making available technical assistance from his staff.

maps. To facilitate Court review, and to provide the Court with options for alternative ways to provide a narrowly tailored constitutional redrawing, I partitioned the unconstitutional districts into four geographic regions paralleling those used in the Court opinions and provided ways of redrawing each region that were compatible with illustrative configurations in other regions. By partitioning the unconstitutional districts by geography, it is possible to partition the task of line drawing in multiple smaller separable tasks, involving only one or a few unconstitutional districts that need to be drawn in each segment.⁴ By this modularization of the redistricting task we can consider alternative plans for each geographic area that involve redrawing the unconstitutional districts and some of the adjacent districts taken as a group without concern for the configuration of districts outside of those in the selected module. The Court can then pick a preferred remedial plan for each geography and combine the chosen separate geographic components so as to create a viable narrowly tailored constitutional plan for the entire state.

The regions are: (1) the Richmond and Henrico area (containing unconstitutional districts 69, 70, 71, 74), the Petersburg area (containing unconstitutional district 63), and the Norfolk-Chesapeake-Portsmouth area (containing unconstitutional districts 79, 80, 89, 90), and (4) the Hampton-Newport News area, also referenced as the Peninsula (containing unconstitutional districts

⁴ In the body of the Report I also briefly discuss another way of typologizing unconstitutional districts in terms of whether they are single or multi-county and whether, if multi-county, they contain a preponderant county population.

92 and 95).⁵ The illustrative remedial plans differ slightly in the way in which each of the geographic modules is drawn.

I offered to the Court one illustrative module for the Richmond area that has two very minor variations: Richmond 1A and Richmond 1B. These variations differ only in how districts 72 and 73 are treated in the module. One module changes both district 73 and district 72; the other changes just district 73. The only reason to consider a change in both districts is that the incumbent locations in these districts are not the same in 2017 as in 2011, and acknowledging that fact can improve overall district compactness without affecting changes in the unconstitutional districts. However, these changes in the configurations of districts 72 and 73 are not required to effectuate a constitutional remedy. Both of these Richmond area illustrative modules in my view remedy the constitution violation found in districts 69, 70, 71, and 74.

I offered to the Court two illustrative modules for the Petersburg area. The first of these has two very minor variations which differ only in how Dinwiddie is treated in the module: Petersburg illustrative module 1A and Petersburg illustrative module 1B. In one variant the Dinwiddie portion of 2011 District 63 is modified slightly so as to improve overall district compactness, and this change necessitates a slight modification of the Dinwiddie portion of District 75. In the

⁵ In the central portion of the state (the Richmond-Petersburg area) district 62 touches districts 70 and 74 as well as district 63. In illustrative map drawing, in order to modularize, the configuration of district 62 must be consistent between the Richmond module and the Petersburg module.

other, the Dinwiddie configurations are left completely unchanged. In Petersburg illustrative module 2, more substantial changes are made, affecting change in five districts, rather than only three districts, or only four districts. However, this map provides the best overall compactness. All these maps, in my view, remedy the constitution violation found in district 63.

I offered to the Court two illustrative module for the Peninsula area. Newport News-Hampton illustrative Module 1 and illustrative Module 2. These differ in how many districts are wholly drawn within Newport News (one or two), though in both modules district 92 is entirely in Hampton, and district 95 is entirely in Newport News. Each of these maps in my view remedies the constitution violations found in district 95 and district 92.

I offered to the Court one illustrative module for the Norfolk-Chesapeake- Portsmouth area that has three very minor variations: Norfolk-Chesapeake 1A, 1B, 1C. These variations differ only very slightly. One variation changes 10 districts in the area, one changes 9, and one changes only 8. The other differences between these variants are in overall compactness and in the number of distinct county pieces found in the plan. These difference occur in districts adjacent to the unconstitutional districts, with the underlying configurations of the four unconstitutional districts in the area either wholly or essentially unchanged across the variants. All of these maps in my view remedy the constitution violation found in districts 77, 80, 89, and 90. However, in the process of reducing the number of districts from the 2011 Enacted Map that need to be changed to achieve a

constitutional remedy, Norfolk Illustrative Module 1C has only one rather than two Norfolk area districts as whole county districts.

2. The plans I drew do not use race as a predominant criterion. As suggested by the *Abrams* decision and many other court cases, a key element of a court adopted plan is that it should be drawn using traditional redistricting criteria. My illustrative remedial maps are each based on the traditional districting criteria identified in U.S. Supreme Court cases and/or the Virginia State Constitution. They also follow the guidelines for addressing issues of unconstitutionality via a narrowly tailored remedy that were laid down in the majority opinion in *Personhuballah v. Alcorn* (Civil Action No. 3:13cv678, January 7, 2016).⁶

As was true for my work as Special Master in *Personhuballah*, I have taken as my first priority to begin the redrawing of the eleven unconstitutional districts at issue here using counties/cities as units to the greatest extent feasible. I have also used other large units of census geography for population equalization purposes to the greatest extent feasible and sought to reduce the splitting of VTDS from what is found in the 2011 Enacted map.

In particular, in my illustrative modules there are nine minority opportunity

⁶ That decision ordered the implementation of a remedial plan for the unconstitutionality previously found in Virginia Congressional District 3 -- with that court-ordered plan to be used in the 2016 election.

districts that lie wholly within a single county, compared to only two such districts in the 2011 Enacted Map. These illustrative modules contain two districts wholly in Richmond, one wholly in Henrico, one wholly in Hampton, one wholly in Newport News, two wholly in Norfolk (except for Norfolk Illustrative Module 1C which has only one), one wholly in Portsmouth, and one wholly in Chesapeake. Since, I have reached the conclusion that it is not mathematically possible to draw more than nine minority opportunity districts that lie wholly within a single county, my illustrative modules make use of one important traditional districting principle, reliance on major large pre-existing political subunit boundaries, such as counties/cities, to the greatest extent that is mathematically possible.

3. Insofar as districts in my illustrative maps are redrawn with substantial African-American populations, it is because following county boundaries to the extent feasible, when taken in conjunction with the existence of concentrated minority populations in various areas of the state, generated such racial proportions. Unlike what is true for the unconstitutional 2011 Enacted map, the observed minority proportions arise because districts in my illustrative remedial modules are drawn following traditional redistricting principles, and not because of any race preponderant motive. Only after traditional districting criteria, such as drawing districts wholly within counties where feasible, have been satisfied, did racial considerations enter into my line-drawing, and even then, race was taken into account only for purposes of seeking to assure that there is no violation of the 14th

Amendment's Equal Protection provision vis-à-vis changes in the racial composition of the unconstitutional districts that might have inadvertently created racial vote dilution. At no time did I seek to adjust the minority population in districts adjacent to the unconstitutional districts to achieve a particular racial result in those adjacent districts. The minority population percentages in those adjacent districts whose boundaries were changed in my illustrative modules resulted from inevitable spillover effects of remedying in a narrowly tailored fashion the packing of African-American voting age population that was done in the 2011 Enacted map.⁷

4. In my illustrative maps, unconstitutional districts are redrawn centered in the county which provided the predominant population in the 2011 plan, when such a

⁷ Since the districts found to be unconstitutional are racially packed, with no compelling justification provided for the high level of minority population in any of them, in reconfiguring the eleven unconstitutional districts in a narrowly tailored and non-race preponderant fashion the process of redrawing will necessarily reduce the minority population proportion within these districts. As a matter of simple geographic logic, this minority population will need to be added to districts adjacent to one or more of the unconstitutional districts, since these adjacent districts are the only districts being changed in my illustrative maps. Thus, the African-American population proportion in some of the adjacent districts will necessarily rise. These changes should positively affect the effective representation of African-American voters in some districts adjacent to the unconstitutional districts, and it is possible that some of the reconfigured districts will now be districts in which the African-American community has a realistic equal opportunity to elect a candidate of choice that was previously denied them. But any such consequences were entirely incidental effects of the redrawing of the unconstitutional districts in a constitutional fashion. Moreover, the degree of reduction in black voting age populations in the reconfigured unconstitutional districts varied among them to a substantial extent because that redrawing depended upon the racial geography and demography in the county (9 or 8 districts) or counties (2 or 3 districts) in which the redrawn district is located.

county can clearly be identified.

5. Plans in each geographic area fully remedy identified constitutional infirmities in the districts found unconstitutional and do so in a narrowly tailored fashion, while taking into account equal protection concerns and the need to avoid the potential for violation of Section 2 of the Voting Rights Act with respect to the realistic opportunity of the minority community to elect candidates of choice in those unconstitutional districts (as well as in district 75).

6. The plans are also drawn in a fashion that is blind with respect to partisan outcomes, with partisan data and election outcome data not examined except where needed to avoid minority vote dilution that might inadvertently occur in the two stage (primary and general) election process if the proportion of minority voting age population is changed in the remedial line drawing process.

7. Changes in the 2011 map are limited to those districts that are adjacent to the unconstitutional ones, and those that contain counties found in the unconstitutional districts, and not all of the districts satisfying these two narrow tailoring factors are changed in order to implement a narrowly tailored remedy. In particular, the illustrative maps that could be constructed from combining my illustrative modules in each of the four geographic regions would change at most 26 districts from the 2011 Enacted map, and there would be a combination of modules from each of the

geographic regions that would change only 21 districts from the 2011 Enacted map.

8. Furthermore, the changes made are narrowly drawn in that they are limited to changes that are triggered by redrawing the eleven unconstitutional districts in a constitutional way, and then dealing with the spillover effects on the districts to which they are adjacent in order to satisfy population and geographic constraints. Changes in the configuration of districts adjacent to an unconstitutional district were not a matter of concern, except with respect to avoiding incumbency pairings, and in terms of following traditional districting criteria. Changes in adjacent districts were made in response to the requirement of eliminating the unconstitutionality in the eleven unconstitutional districts that is my obligation as a special master.

9. The plans follow the legal guidance provided to me by the Court, with a population deviation in each district under 1%.

10. In each of the four geographic areas of the state, at least one of my illustrative modules is more compact on average on both the Reock and the Polsby-Popper measures than the corresponding districts in the 2011 Enacted map. Indeed, with only two exceptions, all the illustrative remedial modules I propose are as or more compact on average than their counterparts in the 2011 Enacted map on both the Reock and the Polsby-Popper measures. The two exceptions are higher on one of

these two measures but lower on the other.⁸ One such module has the narrow tailoring feature of limiting the changes in the Petersburg area to only three districts, and a variant of that map that changes four district does increase compactness as compared to the 2011 enacted map. The other module that is preferred to the enacted map on only one of the two measures of compactness, retains the positive feature of keeping two districts wholly in Newport News, but draws a constitutional rather than an unconstitutional map for the Newport News district found unconstitutional.

11. The districts in my illustrative maps do not, to the best of my knowledge, contain any “fracking.”⁹

12. The districts in the illustrative maps do not, to the best of my knowledge, pair any present (2017) incumbents.¹⁰

⁸ In general, the fewer district boundaries that are changed from an unconstitutional 2011 map that has a low level of compactness in many of its districts, and the fewer counties whose populations are redrawn to be in more accord with traditional districting principles, the more difficult it is to draw a compact map.

⁹ For definition of “fracking,” see the text of the Report, which also has a map showing an example of “fracking” in the 2011 Enacted map. Four of the eleven districts in the 2011 Enacted map found to be unconstitutional contained instances of “fracking” (districts 63, 70, 90, and 95).

¹⁰ As part of my extensive exploratory line drawing, I have also been able to draw constitutional maps following traditional districting principles that do not pair any 2009/2011 incumbents but, since these maps are no longer relevant, I have not bothered to reproduce them in this Report or in my Report of December 7, 2018.

In sum, the illustrative plans/maps in modularized form I have created to offer for review by the Court are intended to offer possible versions of the eleven unconstitutional districts that, in my view, remedy the constitutional violation identified in the majority opinion in *Golden Bethune-Hill v. Virginia* in a narrowly tailored fashion by following traditional districting criteria in each of the four geographic areas of the state I have identified, while still avoiding the pairing of any incumbents.

My modularized approach to line drawing also allows the parties and intervenors to comment on how they might propose particular geography be redrawn without forcing a ripple of changes in other geographic areas of the state and/or to express preferences between alternative configurations in each area of the state. All but Defendant-Intervenors availed themselves of the opportunity prior to the January 10, 2019 Hearing express a relative preference among the illustrative modules I suggested to the Court if one of their own plans -- the plan they sought to have the Court adopt, was not chosen. Among the litigants or concerned groups who expressed such relative preferences at or prior to the 2019 Hearing, there was a consensus preference for Petersburg Illustrative Module 2 and Peninsula Illustrative Module 2, that included both the Plaintiffs and the NAACP, with the Defendant prepared to accept any of the illustrative modules. With respect to the Norfolk area and Richmond area illustrative modules there was no such clear consensus among the illustrative modules suggested as the basis for map drawing in those two regions, but there was no support expressed for Norfolk Illustrative

Module 1C. As of the end of the January 10, 2019 Hearing, Defendant-Intervenors had simply rejected all of the illustrative modules and did not choose to indicate a relative preference among them.

Information about the key features of each of the illustrative configurations in each of the four geographic modules is provided in the body of the Report, and shape files for each were made available by the legislative staff of the Virginia House of Delegates when this Report was filed on December 7, 2018. Unfortunately, however, there were relatively minor errors in the Norfolk area shape files that were posted on December 7, which I discovered too late to correct on December 7. However, those errors in the Norfolk area shape files for the illustrative modules in that area were corrected on the next business day.¹¹

No comments made about my illustrative modules on or before January 10, 2019 have led me to believe it necessary to provide to the Court additional illustrative modules, other than what is provided in offering the corrected versions

¹¹ Minor errors in the population and minority population data reported in my December 7, 2018 Report for the Norfolk area illustrative modules were corrected in the Third Addendum to my December 7, 2018 Report, filed on January 4, 2019, which is based on the corrected shape files deposited with DLS and posted on their website on December 10, 2018. However, there remained errors in my Third Addendum that I have only just now recognized that resulted from the fact that two of the column headings of the first three of the tables in that Addendum were inadvertently reversed: the black voting age population percentages labeled as “Reported” contains the “Correct” figures, and the column labeled as “Correct” contains the figures that were reported in my December 7, 2018 Report. This error does not affect the Dif column in these three tables that shows the difference between the percentages reported in the two columns; and none of these errors affected any of the recommendations in my December 7, 2018 Report. These errors are corrected in the tables reported below in this Second Report.

of my illustrative modules for the Norfolk area. The Court has, as yet, issued no orders for me re the general shape of a final remedial map configuration in any of the geographic regions, or for a plan as a whole. I anticipate receiving such detailed instructions sometime after January 17, 2019. With the assistance of legislative staff, I should be able to conduct any needed further map drawing pursuant to those instructions (e.g., to achieve a still further reduction in an already low number of VTD splits) soon after being given these instructions, so that a court-ordered map can be put into place in a timely fashion.

SECOND REPORT OF THE SPECIAL MASTER

I. BACKGROUND

Corrected election data and corrected maps for each of the Norfolk area illustrative modules is presented in aggregated form in the body of this Second Report. This Second Report incorporates the corrections of typos, inadvertent map and data omissions, and other mistakes identified in my First Addendum of December 10, 2018; my Second Addendum of December 28, 2018; my Third Addendum of January 4, 2019, and my Fourth Addendum of January 8, 2019. To the best of my knowledge the data reported in this Second Report uniformly uses the African-American voting age population data provided to me by the DLS staff of the Virginia Legislature.¹² However, other than these corrections, the text of the

¹² Inadvertently, the DLS definition of black voting age population was not used for the 2011 Enacted Map in my Report of December 7, 2018 and in subsequent addenda, even though the DLS definitions was used for all other maps and illustrative modules in the December 7, 2018 Report and in the three next addenda. The DLS definition takes the mono-racial black voting age population reported by the U.S. Census and adds to it the bi-racial population who report their census racial identities as both black and white. I am indebted to Defendant-Intervenors for calling this error to my attention. This measurement inconsistency between the measurement of black voting age percentage for the 2011 Enacted map and the method used for all other maps and illustrative modules was first noted in my Fourth Addendum of January 8, 2019. This measurement error did not affect any of the recommendations in my December 7, 2018 Report, although there were very minor changes in black population percentages shown for the 2011 Enacted Map in my December 7, 2018 Report that are corrected in my Fourth Addendum of January 8, 2019, and that are shown correctly in this Second Report. At no time did I make use of what has been referred to as the “DOJ method” of measuring black population and voting age population. As I understand it, that method classifies individuals who identify themselves as Hispanic/Latino/Spanish Heritage as Hispanic regardless of their racial identity

body of this Second Report is taken virtually verbatim from the body of the text of my First Report of December 7, 2018.

On December 14, 2018 various briefs were filed that challenged statements or conclusions in my December 7 Report, and some data issues were raised in briefs filed on January 4, 2019. Data issues that have been raised are dealt with in this Second Report in the form of technical corrections to the data reported in my December 7, 2018 Report. More substantive criticisms I have addressed in a second appendix to this Report, Appendix B. Appendix B incorporates almost verbatim and essentially in its entirety my Second Addendum of December 28, 2018, and addresses many of the numerous misleading assertions about my illustrative modules and the process of line drawing that I used that were raised in materials submitted to the Court prior to that date.¹³

On January 15, 2019 Plaintiffs responded to a Court Order requesting a summary table of black voting age data for submitted remedial maps and for the special master's illustrative modules. In a few Norfolk area districts, the black voting age population percentages in Exhibit A of that January 15, 2019 response

¹³ There were further assertions and factual claims made by various Counsel during the January 10, 2019 Hearing that I also regard as misleading or erroneous, but I do not respond to these in Appendix B or elsewhere in this Second Report. I also do not incorporate in this Second Report a response to any documents filed after January 10, 2019, with the exception of the Plaintiffs January 15, 2019 response to the Court Order to provide black voting age population data. The exception occurs because investigating the data discrepancies between the black voting age population in various Norfolk area districts provided by Plaintiffs and those reported by DLS were relevant to verifying the accuracy of the data compilations provided in this Second Report. See Appendix C.

show percentages different from those provided by DLS for the 2011 Enacted map, the NAACP map, and for my illustrative modules for the Norfolk area, even though these percentages are labeled in Exhibit A as DLS based percentages. The possible reasons for these clearly unintended (and very minor) Norfolk area discrepancies in black voting age percentages in Exhibit A vis-à-vis DLS data for the same districts in my illustrative Norfolk area modules and in a few Norfolk area districts in other maps, including one district in the 2011 Enacted Map, are discussed in Appendix C to this Report.¹⁴

1. Pursuant to my responsibilities as a special master in *Golden Bethune Hill v.*

State Board of Elections, to assist and advise the Court, I have

(a) reviewed the present (2011) legislative plan for the State of Virginia House of Delegate drawn by the Virginia General Assembly

(b) familiarized myself with the Court opinions in *Bethune Hill v. State Board of Elections*, especially with respect to the majority opinion's identification in its 2018 ruling of constitutional infirmities in the present configuration of the eleven unconstitutional districts. I have also reviewed the 2017 Supreme Court decision that resulted in the case being remanded for rehearing by a three-judge panel.

¹⁴ As noted above, the data shown in my Second Report are, to the best of my knowledge, the data used by Virginia's own legislative services (DLS).

(c) reviewed basic geographic data for the State (e.g., county and city boundaries), and demographic information on total population and the racial and ethnic composition of population at various levels of census geography, with a focus on areas of the state contained in or adjacent to the eleven districts found unconstitutional.

(d1) obtained (pursuant to an Order of the Court) technical assistance in map creation from staff of the Division of Legislative Services of the Virginia State Legislature (Kent Stigall, and Julie Smith) and logistic support from their supervisor (Amigo Wade), each of whom has signed an oath of confidentiality drafted by the Court.

(d2) obtained (pursuant to an Order of the Court) technical assistance in map creation from an advanced to candidacy Ph.D. student in political science at the University of California, Irvine, Jonathan Cervas. Cervas has technical Geographic Information System (GIS) skills. Cervas has also signed the oath of confidentiality required by the Court.

(e) reviewed all of the plans that had been submitted to the Court on or before November 2, 2018 in terms of their suitability as potential remedies for all of the constitutional violations in the 2011 House of Delegates plan identified by the

Golden Bethune-Hill court. There were five submissions that contained plans and maps that could be analyzed, which I reference in short form as Plaintiff A and Plaintiff B (from the plaintiffs), DI7002 and DI7003 from Defendant Intervenors, (which I sometimes reference simply as 7002 and 7003 for short, since these maps were introduced into the legislature as HB7002 and HB7003), and the map from Virginia State Conference of NAACP Branches, which I henceforth simply label simply as the NAACP map. With the initial exception of the NAACP map, the state legislative staff provided me shape files and data files for each of the five plans so that I had sufficient information on each of the plans to use identical metrics to describe each. These are metrics that can be used by the Court to evaluate the degree to which each offered a narrowly tailored constitutional remedy. In the case of the NAACP map there was need for a supplemental submission to clarify district numbering in the submitted maps before I was able to generate data reports for the map. With that submission in hand, the NAACP map was given the same status as the four other submitted remedial maps and given the same review.¹⁵

¹⁵ There were two further remedial map submissions in time for the Court deadline. Unfortunately, as I was informed by legislative staff, the two College of William and Mary student submissions contained too many errors in the allocation of blocks and other census units to make it possible to create meaningful data reports using the state legislative system or *Maptitude*. Accordingly, I do not consider these maps in my Report. There was also a map submitted by the New Virginia Majority as part of their submission in response to the Court's November 16 response deadline. Because this map was submitted after the Court's November 2 deadline, and because it changed 36 districts -- far more than are needed for a narrowly tailored remedy (see below), I do not consider this map in my Report. I also had access to remedial maps publicly posted on the Internet that were created by the non-partisan Redistricting Project run by Professor Sam Wang at Princeton University. Because this group did not provide a formal submission to the Court, I do not

(f) reviewed the response to proposed remedial plans that had been submitted on or before November 16, 2018 by the parties (and intervenors) in this case.

(g) over the period from October 19-November 16 for Julie Smith and Jonathan Cervas (and over the period beginning in early November for Kent Stigall) I provided instructions about how to create multiple very preliminary illustrative legislative maps for various geographic areas of the state in an iterative fashion. These plans were created as a basis for exploring multiple options for redrawing the eleven districts in a narrowly tailored and constitutional fashion, avoiding unnecessary county and city splits, and seeking to satisfy other traditional districting criteria. These very preliminary maps allowed me to explore mapping options where avoidance of incumbent pairings was not a consideration.

(h) in the process of viewing plans submitted to the court on November 2 for purposes of evaluating their suitability for adoption by the Court, I examined the mapping choices offered in the submitted remedial plans to determine if some elements of them might be adopted in whole or in part even if the plan as a whole

consider these maps in my Report. However, because I believe strongly in the importance of public input into the redistricting process, especially that involving maps based on traditional (good government) redistricting criteria, even though I do not provide specific response to any of the maps proposed by these various groups in my Report, I did briefly examine them for possible useful ideas in remedial line drawing.

was judged unsatisfactory. I also reviewed the feedback about submitted plans from the parties and intervenors received by the Court as of November 16, 2018. Soon after this latter review had been completed, I revisited my preliminary line drawing exercises in order to take into account any criticisms of submitted plans that I might also find relevant to the drafting of the remedial geographically separated modules I was preparing for the Court.

2. There are a number of different criteria that can be used to evaluate a (legislative) redistricting plan as a whole, or used to evaluate the configuration of one or more individual districts. These include

(a) conformity to a standard of one person, one vote;

(b) avoiding either fragmentation or packing of geographically concentrated minority populations that might have the effect or purpose of minimizing or diluting the voting strength of constitutionally protected minorities, and/or lead to retrogression in the ability of minority communities to realistically have an "equal opportunity" to elect candidates of choice in accordance with Section 2 of the Voting Rights Act and the Equal Protection clause of the U.S. Constitution;

(c) avoiding use of race as a predominant criterion for redistricting;

(d) avoiding the creation of districts which are divided into two or more

discontiguous parts;

(e) avoiding splits (partition into two or more legislative districts) of long standing political subunits such as cities or counties,¹⁶ unless these splits become obligatory or near obligatory by the need to satisfy other criteria such as population equality;¹⁷

(f) avoiding unnecessarily ill-compact districts, i.e., ones which are elongated or have irregularly shaped perimeters. ¹⁸

¹⁶ In Reports prepared by the State of Virginia's Division of Legislative Services, political entities which are either cities or counties are described as *localities*. Note also that some political entities that have 'city' in the title, such as Charles City, more closely resemble what in other states would be labeled as counties. I have generally used 'county' as a shorthand for all such entities.

¹⁷ As a matter of practicality, one may also wish to minimize splits in what are called VTDs, i.e., the units used to define vote tabulation boundaries. The formation of the boundaries of such units are specified by local jurisdictions for purposes of administrative convenience. And VTDs are frequently redrawn when there are substantial population shifts over the course of a decade. The main reason for avoiding splitting VTDs is simply to avoid inconvenience to localities, but of course, we would also wish to avoid using race as a preponderant factor in the splitting of VTDs.

¹⁸ See below for further elaboration of the two standard tests for compactness used (Polsby-Popper and Reock), which tap the two key different aspects of compactness – giving an area-based and a perimeter-based measure, respectively. These are two measures that were ordered by the Court to be used in creating comparisons across plans/distRICTS.

In situation such as that applying in *Golden Bethune-Hill*, where a court is drawing a map to remedy a constitutional infirmity, there are three other criteria that are relevant:

(g) narrowly tailoring the remedial map so as to avoid changes in existing district boundaries that are not required to create a constitutional map by

(g1) limiting all changes in districts to the districts that are immediately adjacent to the unconstitutional districts;

(g2) minimizing the number of adjacent districts that are redrawn in the process of creating a constitutional map to the extent feasible. Feasibility is determined by a close examination of the population demography of the areas where unconstitutional districts are found, taking into account the need to avoid minority vote dilution, and the desirability of satisfying traditional criteria of redistricting that are appropriate for a court-imposed map that avoids making race its preponderant criterion (e.g., improving or maintaining overall district compactness, using whole counties and large units of census geography to create districts when this is feasible).¹⁹ Also relevant to narrow tailoring is the identification of the districts not found to be unconstitutional that contain population from one or more

¹⁹ Traditional districting criteria are also sometimes referred to as “good government” redistricting criteria.

of the counties found within the unconstitutional districts, since the redrawing of such counties may be necessary as part of the crafting of a constitutional remedy that is done in accord with traditional districting criteria.

(h) neutrality

A court drawn plan should not be drawn to deliberately either favor or disfavor any political party or point of view.

(i) incumbency pairings

Inc incumbency protection is not a factor that can be permitted to outweigh the need for creation of a plan that satisfies the U.S. Constitution. I began my explorations of possible remedial maps by paying no attention to incumbencies. My aim was to determine the potential for drawing constitutional maps that satisfy traditional districting criteria and provide a narrowly tailored remedy for the constitutional violations found. Only after I had drawn such illustrative maps did I begin to consider incumbency to ascertain whether constitutional maps drawn according to the same principles as my initial illustrative maps could be adapted to also avoid incumbency pairings. Thus, incumbency was the last factor I took into account, and I examined modifications of my initial illustrative maps to see if they could be adapted to avoid incumbent pairings without jeopardizing the narrowly tailored removal of constitutional infirmities in the eleven districts found to be unconstitutional that had been achieved in those initial illustrative maps.

3. Recommendations re the five analyzable remedial plans submitted pursuant to the Court's November 2 deadline

As noted earlier, there were five submissions pursuant to the Court's November 2 deadline that contained plans and maps offered as remedies which had sufficient information provided for me to evaluate them with respect to the relevant criteria discussed in the body of my Report. I reference these as Plaintiff's A and Plaintiff's B (from the plaintiffs), DI7002 and DI7003 from Defendant Intervenors (maps which were first introduced into the legislature), and the map from Virginia State Conference of NAACP Branches, which I henceforth simply label simply as the NAACP map.

The five complete plans/maps offered pursuant to the Court's November 7 deadline are, in my view, fatally flawed by not offered a fully narrowly tailored remedy for the constitutional infirmities in the set of eleven districts found to be unconstitutional instances of race preponderant gerrymandering in that they either modify some legislative districts that, demonstrably, did not need to be changed to deal with the constitutional problems identified (e.g., reconfigurations of more districts than was needed for remedial purposes, or redrawing districts that were not adjacent to the unconstitutional districts) and/or they failed to satisfactorily address the constitutional infirmity in some of the unconstitutional districts in a

narrowly tailored fashion.

I discuss in the Appendix to this report the reasons why I cannot recommend to the Court any of the submitted remedial maps. However, while I cannot recommend the adoption of any of the plans in their present form, I have reviewed the features of each of these submitted proposed remedial maps with an eye toward improving my own understanding of map making possibilities, especially vis-à-vis ways to draw constitutional maps in particular geographic regions of the state.

4. Priorities

(a) Having evaluated the submitted remedial maps and determining that I could not recommend any of them to the Court it became necessary to provide illustrative maps of my own to the Court, indicating ways in which a constitutional map could be drawn. In drawing illustrative maps for consideration by the Court that in my view could serve to remedy the constitutional infirmities identified in the 2018 majority opinion in *Golden Bethune-Hill v. Virginia State Board of Elections*, Civil Action No. 3:14cv852, I have sought to take into account all of the criteria enumerated above. In general, however, there are tradeoffs among the various criteria. In practice, when there are so many distinct criteria to be balance off against one another, it may be impossible to satisfy all criteria fully. For example, strict adherence to a population equality standard may lead to the necessity to split some political subunits, while undue deference to existing district lines may lead to